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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,132

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Robert Chassagnon

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COHEN, PONTANI, LIEBERMAN & PAVANE LLP
551 FIFTH AVENUE
SUITE 1210
NEW YORK, NY 10176

EXAMINER

MAKI, STEVEN D

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/578,132	Applicant(s) CHASSAGNON ET AL.	
	Examiner Steven D. Maki	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>050106</u> . | 6) <input type="checkbox"/> Other: ____. |

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1) The drawings are objected to because Figure 2 includes description written in French. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2) The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3) Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 1, there is no antecedent basis for "the roadway" and "the ground".

Also, the relationship between the elements at line 2 and the elements at line 8 is unclear. In claim 1, it is suggested to (1) on line 2 before "elements" insert --tread pattern--, (2) on line 3 change "the roadway" to --a roadway--, and (3) on line 4 change "the ground" to --the roadway--.

Claim 2 ambiguously refers to "ester". In claim 2 line 2, it is suggested to change "ester" to --the fatty acid ester type--.

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In claim 3, there is no antecedent basis for "the fatty acid ester". In claim 3 line 2, it is suggested to insert --type-- after "the fatty acid ester".

In claim 8, the scope and meaning of "the use of a tread according to claim 1 for the manufacture or retreading of tires" is ambiguous. It is unclear if this language is (1) merely describing the intended use of the tread or (2) requiring a process. If claim 8 is requiring a process, it is unclear which step(s) are included and which step(s) are excluded. For example, it is unclear if claim 8 requires a step of removing a worn tread from a worn tire and then joining the tread of claim 1 to the tire.

4) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Matsumoto et al (covering grooves and tread surface)

5) **Claims 1-6 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al (US 6,035,911) in view of Vasseur et al (US 7,335,692 or WO 02/088238) and Japan 712 (JP 09-099712).**

US 7,335,692 (available under 102(e)) is an English language equivalent to WO 02/088238 (available under 102(a) and 102(b)).

Matsumoto et al discloses a pneumatic tire for a passenger car having a tread comprising a surface layer 7c (covering mix) and a base portion 7b (base mix). See Figure 1, col. 2 lines 4-6). The tread has grooves and tread elements (Figures 1 and 2). The surface layer portion 7c (covering mix) comprises one or more rubbers, a

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reinforcing agent and 1-20 parts fluorine based additive (col. 2 lines 15-23, 32-44). The one or more rubbers may be **isoprene-isobutylene copolymer rubber (butyl rubber)**. See col. 2 lines 15-23. The reinforcing agent may be silica (col. 2 lines 45-49) The tire has excellent drainage when run at high speed on wet road surface and excellent steering stability when run at high speed on dry road surface. Matsumoto et al teaches using aromatic oil in the surface layer 7c (covering mix). See Table 1 and Table 2. Matsumoto et al does not recite using unsaturated C12-C22 fatty acid ester type in the surface layer 7c (covering mix).

As to claim 1, it would have been obvious to one of ordinary skill in the art to include unsaturated C12-C22 fatty acid ester type in the surface layer 7c (covering mix) of Matsumoto et al's pneumatic passenger car tire having excellent drainage on wet road surface and excellent steering stability on dry road surface since Vasseur et al suggests including a plasticizer comprising glycerol fatty acid triester in the tread of a *passenger car tire to improve grip on dry ground and damp ground (wet ground)*. With respect to Matsumoto et al's desire for excellent wet grip, Vasseur et al explains that grip performances are conserved over time because the plasticizer has minimized extrudation during travel to thereby minimize compactation and hardening of the tread (col. 3 lines 43-47). With respect to Matsumoto et al's use of aromatic oil, Vasseur et al teaches that the plasticizer permits use of reduced amounts of aromatic oil to contribute to the preservation of the environment (col. 5 lines 25-31). With respect to Matsumoto et al's disclosure of high speed passenger car tires, Vasseur et al teaches that the plasticizer is particularly advantageous for plasticizing tread compositions for top of the

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range passenger vehicle (high speed passenger vehicle tires). See col. 7 lines 26-34 of Vasseur et al.

Since Matsumoto et al's surface layer portion 7c (covering mix) covers the entire groove surface, the surface layer portion 7c (covering mix) extends, when the tread is new, over a height H_r at least equal to 30% of the height H of the face of the tread pattern element.

With respect to the limitation regarding at most equal to 10% of the height H_r , it would have been obvious to one of ordinary skill in the art to provide the surface layer 7c (covering mix) of Matsumoto et al's passenger car tire such that, after wear at most equal to 10% of the height H_r , the base portion 7b (base mix) is exposed and thereby opens on to the contact face since (1) Japan 712, also directed to a passenger car tire, suggests forming a surface layer 1 (covering mix) containing a fluorine based resin with a thickness t_c of less than 10% of the thickness t_G of the tread 2 (base mix) such as 0.5 mm to 1 mm (abstract, machine translation) and optionally (2) it is taken as well known / conventional per se in the tire tread art to provide grooves of a passenger car tire with a depth of about 6-8 mm. Japan 712's disclosure of thickness for a surface layer is applicable to Matsumoto et al since the surface tread layer of Matsumoto and the surface layer of Japan 712 each comprise a fluorine based resin. Example: If the covering mix is 0.5 mm and the groove depth is 6 mm, then the covering mix wears so as to expose the base mix at 8.3% ($0.5 \text{ mm} / 6 \text{ mm} \times 100\%$). The value 8.3% falls within the range of at most 10%.

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As to claims 2-4, Vasseur et al teaches using 10-40 parts glycerol fatty acid triester such as using glycerol trioleate (col. 5 lines 20-44).

As to claims 5 and 6, Matsumoto et al teaches using 100 parts isobutylene isoprene copolymer rubber (butyl rubber). See col. 2 lines 15-23.

As to claim 8, Matsumoto et al teaches a tread. In any event: it would have been obvious to one of ordinary skill in the art to use Matsumoto et al's cap base tread to retread a tire since it is taken as well known / conventional per se in the tire art to remove a worn tread from a worn tire and then bond a new tread (e.g. a tread having a single layer construction or cap base construction) to the worn tire in order to extend the life of the tire.

As to claim 9, Matsumoto et al teaches a tire with a tread.

6) Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al (US 6,035,911) in view of Vasseur et al (US 7,335,692 or WO 02/088238) and Japan 712 (JP 09-099712) as applied above and further in view of Japan 701 (JP 2000-153701).

As to claim 7, it would have been obvious to one of ordinary skill in the art to provide the base mix 7b of Matsumoto et al's passenger car tire such that it is devoid of butyl rubber since Japan 701, which teaches covering a groove with a butyl rubber layer to prevent belt failure, suggests providing a base mix 1 of a passenger car tire such that it comprises crude rubber (natural rubber, styrene butadiene rubber, polybutadiene rubber, polyisoprene rubber or a mixture thereof (paragraph 5 of machine translation).

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Butyl rubber is not one of the disclosed rubbers for the tread 1 (base mix). See paragraph 5 of machine translation of Japan 701.

Japan 701 (only groove covered)

7) Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 701 (JP 2000-153701) in view of Vasseur et al (US 7,335,692).

Japan 701 discloses a passenger car tire having a tread 1 comprising a major groove 2 separating tread elements (Figure 1). Japan 701 is silent as to use a plurality of grooves. However, it would have been obvious to one of ordinary skill in the art to provide Japan 701's tread with a plurality of grooves defining a plurality of tread elements since it is taken as well known / conventional in the tire tread art to provide the tread of a pneumatic passenger car tire with circumferential grooves and lateral grooves and blocks defined by those grooves in order to improve wet traction of the tire. The tread 1 (base mix) comprises crude rubber (natural rubber, styrene butadiene rubber, polybutadiene rubber, polyisoprene rubber or a mixture thereof (paragraph 5). In other words, the tread is devoid of butyl rubber. Japan 701 teaches preventing belt failure by covering at least the groove bottom with a covering rubber layer 3. The covering rubber layer 3 comprises **isobutylene isoprene rubber (butyl rubber)**. See paragraph 5 of machine translation. Japan 701 teaches covering only the groove bottom with the covering rubber layer. See Figure 1 and Example 1 (paragraph 9 of machine translation). Japan 701 also teaches covering all of the groove bottom and groove sidewalls with the covering rubber layer (paragraph 12 of machine translation). Japan

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701 does not recite using unsaturated C12-C22 fatty acid ester type in the surface layer 7c (covering mix).

As to claim 1, it would have been obvious to one of ordinary skill in the art to include unsaturated C12-C22 fatty acid ester type in the covering rubber layer 3 (covering mix) of Japan 701's pneumatic passenger car tire for use in high humidity region since Vasseur et al suggests including a plasticizer comprising glycerol fatty acid triester and hydrocarbon resin in the tread of a *passenger car tire to minimize extrudation during travel to thereby minimize compactation and hardening of the tread* (col. 3 lines 43-47), *permit use of reduced amounts of aromatic oil to contribute to the preservation of the environment* (col. 5 lines 25-31) and *improve resistance to separation of the crown plies (belt plies) of the tire* (col. 21 lines 4-9).

With respect to "at least one base mix opens on to the contact face when new or at the latest after wear at most equal to 10% of the height Hr" (claim 1), Japan 701 satisfies this limitation because Japan 701 teaches covering the sidewalls and bottom of the groove instead of the tread surface.

With respect to the limitation regarding at least equal to 30%, it would have been obvious to one of ordinary skill in the art to cover Japan 701's groove with the covering rubber layer comprising isobutylene isoprene rubber (butyl rubber) such that the covering layer (butyl rubber layer) extends over a height Hr at least equal to 30% of the height H of the face of the tread pattern elements since Japan 701 teaches covering both the bottom and sidewalls of the groove 2 with the butyl rubber covering layer to prevent moisture from moving from the groove to the belt to prevent belt failure.

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As to claims 2-4, Vasseur et al teaches using 10-40 parts glycerol fatty acid triester such as using glycerol trioleate (col. 5 lines 20-44).

As to claims 5 and 6, Japan 701 teaches using 100 parts isobutylene isoprene copolymer rubber (butyl rubber). See abstract, paragraph 5, 7 of machine translation.

As to claim 7, Japan 701 teaches a tread 1 (base mix) which is devoid of butyl rubber. Butyl rubber is not one of the disclosed rubbers for the tread 1 (base mix). See paragraph 5 of machine translation of Japan 701.

As to claim 8, Japan 701 teaches a tread. In any event: it would have been obvious to one of ordinary skill in the art to use Japan 701's tread to retread a tire since it is taken as well known / conventional per se in the tire art to remove a worn tread from a worn tire and then bond a new tread (e.g. a tread having a single layer construction or cap base construction) to the worn tire in order to extend the life of the tire.

As to claim 9, Japan 701 teaches a tire with a tread.

Remarks

- 8) The remaining references are of interest.
- 9) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven D. Maki/
Primary Examiner, Art Unit 1791

Steven D. Maki
January 19 2008